

PATENT Docket No. 20060/10001D

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Sir:

The documents listed on the enclosed PTO Form-1449 are submitted pursuant to 37 CFR §§ 1.56, 1.97, and 1.98. Copies of the documents that have not been previously submitted in the parent applications are enclosed.

TIME OF FILING

This information disclosure statement is being filed to the best of the undersigned's knowledge before the mailing date of a first Office action on the merits. In accordance with 37 CFR §1.97(b), no certification or fee is required.

The Commissioner is authorized to charge any fee deficiency required by this paper, or credit any overpayment, to Deposit Account No. 50-2455. A copy of this paper is enclosed.

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Respectfully submitted,

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By:

Mark G. Hanley

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November 10, 2004

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INFORMATION DISCLOSU

U.S. Department of Commerce Patent and Trademark Office

Atty. Docket No. Serial No. 20060/10001D 10/806,880

Applicant

David A. Goldman

Filing Date Group Art Unit 3/23/04 2121

INFORMATION DISCLASURE STATEMENT (Use recombineds if necessary)

•17		Document		Name	Class	Subclass	Filing Date
*Examiner 'Initials		Number Number	Issue Date	Name	Class	Subciass	If Appropriate
/NED/	A01	5,270,939	12/14/1993	Goldberg et al.			
	A02	5,323,722	6/28/1994	Goto et al.			
	A03	5,430,658	7/4/95	Divinsky et al.			
	A04	5,444,640	8/22/95	Hirai			
	A05	5,510,994	4/23/1996	Tsonis et al.			
	A06	5,559,771	9/24/1996	Kim			
	A07	5,576,968	11/19/96	Mizuno et al.			
	A08	5,668,730	9/16/97	Tsonis et al.			
	A9	5,740,056	04/14/1998	Futamura et al.			
	A10	5,751,583	5/12/1998	Kyuno et al.			
	A11	5,791,271	8/11/1998	Futamura			
V	A12	5,911,182	6/15/1999	Uyama et al.			
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Serial No. Form PTO-1449 (Modified) U.S. Department of Commerce Atty. Docket No. Patent and Trademark Office 10/806,880 20060/10001D Applicant David A. Goldman INFORMATION DISCLOSURE STATEMENT Filing Date Group Art Unit (Use several sheets if necessary) 3/23/04 2121

			OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)
·/NE	D/	C01	Gunilla Borgefors, Distance Transformations in Digital Images, 34 Computer Vision Graphics, and Image Processing, pp 334-371 (1986)
		C02	Gabriella Sanniti Di Bata et al., (3,4) Weighted Skeleton Decomposition for Pattern Representation and Description, 27 Pattern Recognition, pp 1039-1049 (1994)
		C03	David S. Doermann et al., The Interpretation and Reconstruction of Interfering Strokes, pp 41-51
		C04	Robert M. Haralick et al., Glossary of Computer Vision Terms, 24 Pattern Recognition, pp 69-93 (1991)
		C05	Oivind Due Trier et al., Feature Extraction Methods for Character Recognition—A Survey, 29 Pattern Recognition pp 641-661 (1996)
		C06	Narenda Ahuja and Jen-Hui, Shape Representation Using a Generalized Potential Field Model, 19 IEEE Transactions On Pattern Analysis and Machine Intelligence 169-176 pp (1997)
		C07	Carlo Arcelli et al., A One-Pass Two-Operation Process to Detect the Skeletal Pixels on the 4-Distance Transform, 11 IEEE Transactions On Pattern Analysis and Machine Intelligence pp 411-414, 4/98
		C08	Herbert Freeman et al., A Corner-Finding Algorithm for Chain-Coded Curves, IEEE Tranactions on Computers, pp 297-303 (1997)
		C09	Chia-We Liao and Jun S. Huang, Stroke Segmentation by Bernsterin-Bezier Curve Fitting, 23 Pattern Recognition, pp 478-484 (1990)
		C10	Shigehehiro Fukushima, Division-Based Analysis of Symmetry and Its Application, 19 IEEE Transactions On Pattern Analysis and Machine Intelligence, pp 144-148
		C11	Remi Ronford, Region-Based Strategies for Active Contour Models, 13 International Journal of Computer Vision, pp 229-251 (1994)
		C12	I.S.I. Abuhaiba et al., Processing of Binary Images of Handwritten Text Documents, pp 1161-1177 (1996)
		C13	Stefan Carlsson, Projectively Invariant Decomposition and Recognition of Planar Shapes, 17(2) International Journal of Computer Vision, pp 193-209 (1996)
		C14	Richard C. Staunton, An Analysis of Hexagonal Thinning Algorithms and Skeletal Shape Representation, 29 Pattern Recognition, pp 1131-1146 (1996)
		C15	Fernando Rannou et al., Equilateral Polygon Approximation of Closed Contours, 29 Pattern Recognition, pp 1105-1115 (1996)
1	/	C16	Benjamin B. Kimia et al., Shapes Shocks, and Deformations I: The Components of Two- Dimensional Shape and the Reaction-Diffusion Space, 15 International Journal of

/Nathan Durham/	DATE CONSIDERED	07/15/2009
*EXAMINER: Initial if reference considered, whether or not ci citation if not in conformance and not cinsidered. Include copy		

		Computer Vision, pp 189-224 (1995)
· /NED/	C17	Gideon Guy et al., Inferring Global Perceptual Contours From Local Features, 20 International Journal of Computer Vision, pp. 113-133 (1996)
-	C18	Roberto Marcondes Cesar Junior et al., Towards Effective Planar Shape Representation With Multiscale Digital Curvature Analysis Based on Signal Processing Techniques, 29 Pattern Recognition, pp 1559-1569 (1996)
	C19	Paul C. K. Kwok, A Thinning Algorithm by Contour Generation, 31Communications of the ACM, pp 1314-1324 (1988)
	C20	Paul L. Rosin et al., Segmentation of Edges Into Lines and Arcs, Image and Vision Computing, pp 109-114 (1989)
	C21	Hirobumi Nishida, Structural Feature Extraction Using Multiple Bases, 62 Computer Vision and Image Understanding, pp 78-89 (1995)
	C22	G.A.W. West et al., Techniques for Segmenting Image Curves Into Meaninful Descriptions, 24 Pattern Recognition, pp 643-652 (1991)
	C23	Wenhua Wan et al., Segmentation of Planar Curves into Straight-Line Segments and Elliptical Arcs, 59 Graphical Models and Image Processing, pp 484-494 (1997)
	C24	Ju Jia Zou et al., Skeletonization of Ribbon-Like Shapes Based on Regularity and Singularity Analyses, 31 IEEE Transactions on Systems, Man, and Cybernetics-Part B: Cybernetics (2001)
	C25	Hirobumi Nishida, Structural Feature Indexing for Retrieval of Partially Visible Shapes, 35 Pattern Recognition, pp 55-67 (2002)
	C26	Ji-Rong Lin et al., Stroke Extraction for Chinese Characters Using a Trend-Followed Transcribing Technique, 29 Pattern Recognition, pp 1789-1805
	C27	M. Pilar Martinez-Perez et al., A Thinning Algorithm Based on Contours, 39 Computer Vision, Graphics, and Image Processing, pp 186-201 (1987)
	C28	Elyse H. Milun et al., General Ribbon-Based Thinning Algorithms for Stylus-Generated Images, 76 Computer Vision and Image Understanding, pp 267-277 (1999)
	C29	Irwin Sobel, Neighborhood Coding of Binary Images for Fast Contour Following and General Binary Array Processing, 8 Computer Graphics and Image Processing, pp 127-135 (1978)
	C30	C.A. Rothwell, et al., Planare Object Recognition Using Projective Shape Representation, 16 International Journal of Computer Vision, pp 57-99 (1995)
	C31	I.S.I. Abuhaiba et al., Fuzzy State Machines to Recognize Totally Unconstructed Handwritten Strokes, 13 Image and Vision Computing, pp 755-769 (1995)
V	C32	Serban Iliescu et al., Proposed Heuristic Procedures to Preprocess Character Patterns

EXAMINER /Nathan Durham/ DATE CONSIDERED 07/15/2009

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not cinsidered. Include copy of this form with next communication to applicant.

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Form PTO-1449 (Modified)	U.S. Department of Commerce	Atty. Docket No.	Serial No.	_
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		Using Line Adjacency Graphs, 29 Pattern Recognition, pp 951-969 (1996)
· /NED/	C33	Fu Chang et al., Feature Analysis Using Line Sweep Thinning Algorithm, 21 IEEE Transactions on Pattern Analysis and Machine Intelligence, pp 145-158 (1996)
-	C34	Hyeong In Choi et al., New Algorithm for Medial Axis Transform of Plance Domain, 59 Graphical Models and Image Processing, pp 463-483 (1997)
	C35	Toshiyuki Imai, A Topology-Oriented Algorithm for Voronoi Diagram of Polygons.
	C36	Martin Held, VRONI: An Engineering Approach to the Reliable and Efficient Computation of Voronoi Diagrams of Points and Line Segments, 18 Computational Geometry, pp 95-123 (2001)
	C37	Kokichi Sugihara, A Robust Topology-Oriented Incremental Algorithm For Voronoi Diagrams, 4 International Journal of Computational Geometry and Applications, pp 179-228 (1994)
	C38	Nikolaos G. Bourbakis, A Rules Based Scheme for Synthesis of Texture Images, pp 999-1003
	C39	Takashi Ida et al., Self-Affine Mapping System and Its Application to Object Contour Extracation, 9 IEEE Transactions On Image Processing, pp 1926-1936 (2000)
	C40	Takashi Ida et al., Self-Affine Mapping System for Object Contour Extraction, pp 250-254 (2000)
	C41	Wei-Ying Ma et al., Edge Flow: A Technique for Boundary Detection and Image Segmentation, 9 IEEE Transactions on Image Processing, pp 1375-1387 (2000)
	C42	Giancarlo Iannizzotto et al., Fast and Accurate Edge-Based Segmenation With No Contour Smoothing in 2-D Real Images, 9 IEEE Transactions On Image Processing, pp 1232-1237 (2000)
	C43	Tony F. Chan et al., Active Contours Without Edges, 10 IEEE Transactions On Image Processing, pp 266-277 (2001)
	C44	Mary L. Comer et al., The EM/MPM Algorithm for Segmentation of Textured Images: Analysis and Further Experimental Results, 9 IEEE Transactions on Image Processing, pp 1731-1744 (2000)
	C45	Gerard J. Genello et al., Graeco-Latin Squares Design for Line Detection in the Presence of Correlated Noise, 9 IEEE Transactions On Image Processing, pp 609-622 (2000)
	C46	Michael K. Schneider et al., Multiscale Methods for the Segmenation and Reconstruction of Signals and Images, 9 IEEE Transactions On Image Processing, pp 456-467 (2000)
	C47	Mario A. T. Figueiredo, Unsupervised Contour Representation and Estimation Using B- Splines and a Minimum Description Length Criterion, p 1075-1087 (2000)
A	C48	Mahmoud Ramze Rezaee et al., A Multiresolution Image Segmentation Technique Based

EXAMINER /Nathan Durham/ DATE CONSIDERED 07/15/2009

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not cinsidered. Include copy of this form with next communication to applicant.

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David A. Goldman |
Filing Date | Group Art Unit |
3/33/04 | 2121

INFORMATION DISCLOSURE STATEMENT

(Use several sheets if necessary)

		on Pyramidal Segementation and Fuzzy Clustering, 9 IEEE Transactions On Image Processing, pp 1238-1248 (2000)
/NED/	C49	Aart Bik et al., Efficient Exploitation of Parallelism on Pentium III and Pentium 4 Processor-Based Systems, Intel Technology Journal Q1, pp 1-9 (2001)
	C50	Peter W. Shor et al., Detecting and Decomposing Self-Overlapping Curves, ACM, pp 44-50 (1989)
	C51	Louisa Lam et al., Thinning Methodologies-A Comprehensive Survey, 14 IEEE Transactions On Pattern Analysis and Machine Intelligence, pp 869-885 (1992)
	C52	Gabriella Sannti Di Baja, Well-Shaped, Stable, and Reversible Skeletons from the (3,4)-Distance Transform, 5 Journal of Visual Communication and Image Representation, pp 107-115 (1994)
	C53	S. Di Zeno, Run-Based Algorithms for Binary Image Analysis and Processing, 18 IEEE Transaction On Pattern Analysis and Machine Intelligence, pp 83-88 (1996)
	C54	H. Nishida et al., Thin Line Representation From Contour Representation of Handprinted Characters, Pixels to Features III: Frontiers in Handwriting Recognition, pp 29-39 (1992)
	C55	Richard G. Casey et al., A Survey of Methods and Strategies in Character Segmentation, 18 IEEE Transactions On Pattern Analysis and Machine Intelligence, pp 691-705 (1996)
	C56	Meir Barozhar et al., Automatice Findind of Main Roads in Aerial Images by Using Geometric Stochastic Models and Estimation, 18 IEEE Transactions On Patern Analysis and Machine Intelligence, pp 707 (1996)
	C57	David S. Doermann et al., Recovery of Temporal Information From StaticImages of Handwriting, 15 International Journal of Computer Vision, pp 143-164 (1995)
	C58	Evan C. Sherbrooke et al., Differential and Topological Properties of Medial Axis Transforms, 58 Graphical Models and Image Processing, pp 574-592 (1996)
	C59	G.F. McLean, Geometric Correction of Digitized Art, 58 Graphical Models and Image Processing, pp 142-154 (1996)
	C60	Hsin-Teng Sheu et al., A Rotationally Invariant Two-Phase Scheme For Corner Detection, 29 Pattern Recognition, pp 819-828 (1996)
	C61	Magdi Mohamed et al., Handwritten Word Recognition Using Segmentation-Free Hidden Markov Modeling and Segmentation-Based Dynamic Programming Techniques, 18 IEEE Transactions On Pattern Analysis and Machine Intelligence, pp 548-554 (1976)
	C62	Hirobumi Nishida, Model-Based Shape Matching With Structural Feature Grouping, 17 IEEE Transactions on Pattern Analysis and Machine Intelligence, pp 315-320 (1995)
V	C63	Steven Gold et al., A Graduated Assignment Algorithm for Graph Matching, 18 IEEE

EXAMINER /Nathan Durham/

DATE CONSIDERED

07/15/2009

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not cinsidered. Include copy of this form with next communication to applicant.

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INFORMATION DISCLO		Filing Date	Group Art Unit
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		Transactions On Pattern Analysis and Machine Intelligence, pp 377-388 (1996)
/NED/	C64	Jianying Hu, A Hierarchial Approach to Efficient Curvilinear Object Searching, pp 208- 220 (1996)
*	C65	Paul L. Rosin, Augmenting Corner Descriptors, 58 Graphical Models and Image Processing, pp 286-294 (1996)
	C66	Panagiotis G. Tzionas et al., Collision-Free Pathn Planning for Diamond-Shaped Robot Using Two-Dimensional Cellular Automata, 13 IEEE Transactions On Robotics and Automation, pp 237-250 (1997)
	C67	Hirobumi Nishida, A Structural Model of Curve Deformation by Discontinuous Transformations, 58 Graphical Models and Image Processing, pp 164-179 (1996)
	C68	Ramanujan S. Kashi et al., 2-D Shape Representation and Averaging Using Normalized Wavelet Descriptors, 66 Simulation, pp 164-178 (1996)
	C69	Shy-Shyan et al., Skeletonization for Fuzzy Degraded Character Images, 5 IEEE Transactions On Image Processing, pp 1481-1485 (1996)
	C70	Paul L. Rosin et al., Nonparametric Segmentation of Curves Into Various Representations, 17 IEEE Transactions On Pattern Analysis and Machine Intelligence, p. 1140-1153 (1995)

The PTO did not receive the following listed Item(s) References P. 2 of 6 to 6 of 6.

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